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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/559,772
Filing Date: December 07, 2005
Appellant(s): SANTINI ET AL.

Roland E. Long, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 20, 2011 appealing from the Office action mailed October 21, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

1, 4, 8

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5277510	Okamoto et al	1-1994
6220774	Fukushima	4-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto et al. (US 5,227,510), hereinafter Okamoto, as noted in the Final Office Action.

Regarding claim 1, Okamoto discloses a ball-point pen comprising:

a tip (comprised of 2 and 3 of Fig. 3);

a capillary channel (21 and 23 of Fig. 2 and 3) within the tip;

a hole (the hollow interior of element 3 where spring 6 resides; see Fig. 3) within the tip and connected to the capillary channel (as shown in Fig. 3);

a reservoir (4 of Fig. 3) communicating with the hole connected to the capillary channel of the tip (as shown in Fig. 3);

a ball (1 of Fig. 3) for writing, the ball located with the tip (as shown in Fig. 3, ball 1 is located in the tip (comprised of 2 and 3));

a cavity (22 of Fig. 2) which seats the ball for writing, the cavity having a retaining edge (26 of Fig. 2);

a compression-resilient spring (6 and 6a of Fig. 3) extending through the hole and terminating in a straight portion (6a of Fig. 3), which straight portion is aligned with an longitudinal axis of the ball-point pen, the straight portion having a free end (the tip of 6a) in contact with the ball (Col. 3, Lines 34-36),

the ball (1 of Fig. 2) being kept pressed against the retaining edge (26 of Fig. 2) of the cavity (22 of Fig. 2) as a result of the thrust of the compression-resilient spring (Col. 3, Lines 53-60);

a narrow section (23 of Fig. 2) of a locally radially decreased cross-section within the capillary channel coming into contact with the said straight portion (6a of Fig. 3) of the spring (6 of Fig. 3), the narrow section preventing the straight portion of the spring from becoming inclined with respect to the longitudinal axis of the ball-point pen (Col. 3, Lines 51-62; therefore capillary channel 21 and 23 narrows at narrow section 23 in Fig. 2, through which the straight part 6a of the spring extends, helping prevent the straight portion from becoming inclined),

the narrow section which, being passed through in the axial direction by the said straight portion (6a of Fig. 3) of the spring, is dimensioned such as to contain said

straight portion in an approximately complementary manner with a minimum amount of play, substantially preventing said straight portion from assuming inclined positions with respect to the longitudinal axis Col. 3, Lines 51-68 to Col. 4 Lines 1-3; therefore because the ball is kept in place by the straight portion of the spring, the straight portion of the spring must be inherently kept straight and in place by the narrow section 23 in a complimentary manner with a minimum amount of play),

wherein said straight portion (6a) consists of only a single straight portion extending from a distal most end in contact with the ball (as shown in Fig. 2) towards a coiled portion (6) of the spring, the entire single straight portion being located on the longitudinal axis of the ball-point pen (as shown in Fig. 3);

and a radial through-groove (24 of Fig. 2) connecting the cavity seating the ball to the hole, the radial through-groove being outside the narrow section containing the straight portion (Col. 3, Lines 5-7; therefore the grooves are radially outside the narrow section).

Claims 1, 4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukushima (US 6,220,774 B1).

Regarding claim 1, Fukushima discloses a ball-point pen comprising:

a tip (2 of Fig. 2);

a capillary channel (area between top of 2f and bottom of 2g; see marked up Fig. 3 below) within the tip;

a hole (the bore of tip 2; see Fig. 2) within the tip and connected to the capillary channel;

a reservoir (5 of Fig. 6) communicating with the hole connected to the capillary channel of the tip (as shown in Fig. 6);

a ball (3 of Fig. 2) for writing, the ball located with the tip (as shown in Fig. 2, ball 3 is located within tip 2 at portion 2i);

a cavity (2h of Fig. 2) which seats the ball for writing, the cavity having a retaining edge (2i of Fig. 2 or 3; Col. 3, Lines 9-13, 18-20);

a compression-resilient spring (4 of Fig. 2) extending through the hole and terminating in a straight portion (4a of Fig. 2), which straight portion is aligned with an longitudinal axis of the ball-point pen, the straight portion having a free end (the tip of 4a) in contact with the ball (Col. 3, Lines 21-30),

the ball (3) being kept pressed against the retaining edge (2i) of the cavity as a result of the thrust of the compression-resilient spring (Col. 3, Lines 21-30);

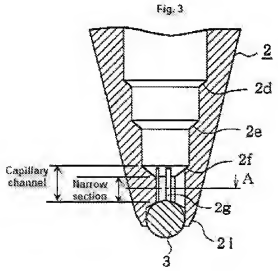
a narrow section (see marked-up Fig. 3 below) of a locally radially decreased cross-section within the capillary channel coming into contact with the straight portion of the spring, the narrow section preventing the straight portion of the spring from becoming inclined with respect to the longitudinal axis of the ball-point pen (Col. 3, Lines 43-50; therefore the narrow section helps prevent the straight portion from becoming inclined),

the narrow section which, being passed through in the axial direction by the said straight portion (4a) of the spring (4), is dimensioned such as to contain said straight portion in an approximately complementary manner with a minimum amount of play, substantially preventing said straight portion from assuming inclined positions with

respect to the longitudinal axis (Col. 3, Lines 43-50; therefore the narrow section is inherently in complementary manner with a minimum amount of play which prevent the straight portion from becoming inclined),

wherein said straight portion (4a) consists of only a single straight portion extending from a distal most end in contact with the ball (as shown in Fig. 2) towards a coiled portion (4) of the spring, the entire single straight portion being located on the longitudinal axis of the ball-point pen (as shown in Fig. 2); and

a radial through-groove (2gg of Fig. 4) connecting the cavity seating the ball to the hole, the radial through-groove being outside the narrow section containing the straight portion (Col. 3, Lines 40-42; therefore the grooves are radially outside the narrow section).



Regarding claim 4, Fukushima discloses the narrow section is formed by a cylindrical shaped restriction (see Fig. 4; Fig. 4 is the cross section of the narrow section).

Regarding claim 8, Fukushima discloses a cross section through the narrow section on a plane perpendicular to the longitudinal axis defines a circular opening surrounding said straight portion (see Fig. 4 which is the cross section of the narrow section; 2g defines the circular opening through which the straight portion 4a extends.)

(10) Response to Argument

Appellant's remarks have been carefully considered. Regarding claim 1, Appellant argues that prior art Okamoto fails to disclose or fairly suggest a narrow section within the capillary channel because element 21 cannot be considered part of a capillary channel because its diameter is too large and it would not have any capillary effect; Examiner's interpretation of capillary channel is incorrect; and only element 23 can be considered a capillary channel and element 23 does not have a narrow section. Appellant further argues that Examiner's interpretation of a hole within the tip is also incorrect. This however is not deemed persuasive. Line 4 of claim 1 does not further limit a capillary channel, i.e., what it is supposed to be and what it can't be. There is no definition in the Specification either. Appellant specifically points to Page 5 and Lines 1-14 of the Specification for definition. However, that section does not clearly nor positively define a capillary channel. Therefore, "capillary" in claim 1 is given its broadest reasonable interpretation consistent with those skilled in the art. Per Merriam-Webster dictionary, capillary is defined as "having a very small bore". Therefore "capillary channel" is interpreted as a passage with a small diameter to create capillary effect. As shown in Fig. 3 of Okamoto, Element 21 definitely qualifies as a capillary channel because the ink in reservoir (4) must pass through this area to get to the ball

(1). The diameter of element 21 also appears to be at least 1/10th as that of the reservoir. Therefore, there is no question that the diameter of element 21 would provide a capillary action and that one skilled in the art would consider element 21 as part of a capillary channel and that element 23 as a narrow section of the capillary channel. Furthermore, the term "hole" has not been defined in the claim or in the specification either. Therefore "hole" is interpreted using its plain dictionary meaning as an opening and the hollow cavity where the spring resides in Fig. 3 definitely qualifies as a hole. Accordingly, Okamoto clearly discloses and teaches each and every element of claim 1.

Regarding claim 1, Appellant also argues that Fukushima does not teach a capillary channel with a narrow section because section 2f as shown in annotated figure 3 in Section (9) cannot be considered a capillary channel as its diameter is too large to produce capillary effect. This is also not deemed persuasive. As discussed previously, because the claim and specifications did not define “capillary”, the plain meaning of capillary as a passage with a small diameter to create capillary effect was used. Referring to Fig. 2 and 6 of Fukushima and comparing the diameters of the reservoir 6 to the diameter of the capillary channel in question, section 2f definitely qualifies as part of a capillary channel because the ink in reservoir (5) must also pass through this area to get to the ball (3). The diameter of section 2f also appears to be at least 1/10th or more as that of the reservoir. Therefore, there is no question that the diameter of section 2f would provide a capillary action and that one skilled in the art would consider section 2f as part of a capillary channel and that section 2g as a narrow section of the

capillary channel. Accordingly, Fukushima clearly discloses and teaches each and every element of claim 1.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/JENNIFER C CHIANG/

Examiner, Art Unit 3751

Conferees:

/Gregory L. Huson/

Supervisory Patent Examiner, Art Unit 3751

/KEVIN P. SHAVER/

Supervisory Patent Examiner, Art Unit 3754